

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Jonathan D. Douglas et al.

TITLE : ESTIMATING EVAPORATOR AIRFLOW IN
VAPOR COMPRESSION CYCLE COOLING
EQUIPMENT

APPLICATION NO. : 10/614,598

FILING DATE : July 7, 2003

EXAMINER : Marc E. Norman

ART UNIT : 3744

ATTORNEY DOCKET NO. : FDS-P10.1-US

TO: Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§ 1.56, 1.97 and 1.98

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement (IDS) for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION

The forty-eight (48) documents that are being brought to the attention of the Examiner for consideration are listed on Form PTO-1449 (4 pgs.) attached hereto.

II. COPIES (check at least one box)

A. X Pursuant to the Official Gazette Notice dated August 5, 2003, the PTO waived the requirement under 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. Patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003, and for all international applications that have entered the national stage under 35 USC 371 after June 30, 2003. Since the subject application was filed after June 30, 2003, submitted herewith is a legible copy of each foreign patent document (0 documents) and each non-patent document/literature (5 documents) listed.

B. Any patents, publications or other information which are listed on Form-PTO/SB/08A, Form-PTO-1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number

U.S. Filing Date

C. Submitted herewith is a legible copy of (i) each U.S. patent application publication and U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; (iii) for each cited pending U.S. application, the application specification including the claims, and any drawing of the application which caused it to be listed including the claims directed to that portion; and (iv) all other information or that portion which caused it to be listed.

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A. X Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B. A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

C. The following additional information is provided for the Examiner's consideration.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. X The Examiner is advised that the following co-pending application(s) contains subject matter that may be related to the present application. By bringing this (these) application(s) to the Examiner's attention, Applicants do not waive the confidentiality provisions of 35 U.S.C. § 122.

<u>Serial No.</u>	<u>Filing Date</u>	<u>Art Unit</u>	<u>Atty. Docket</u>
10/143,464	May 10, 2002	3744	FDS-P5.1-US
09/939,012	August 24, 2001	2857	FDS-P7-US
10/313,918	December 4, 2002	2125	FDS-P7.1-US

V. THIS IDS IS BEING FILED UNDER

A. X 37 C.F.R. § 1.97(b): (check only one box)

1. ___ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.

2. ___ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.

3a. ___ before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required.

3b. ___ in the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

4. X before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B. ___ 37 C.F.R. § 1.97(c): (check only one box)

•before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1. ___ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

2. ☐ See the certification below. No fee is required.

C. ☐ 37 C.F.R. § 1.97(d): (check only one box)

• after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1. ☐ See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.311.

I. CERTIFICATION UNDER 37 C.F.R. § 1.97(e): (if required, check only one box)

A. ☐ each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)); or

B. ☐ no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).

C. ☐ Some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. PAYMENT OF FEES (if required, check only one box)

A. ☐ A check in the amount of \$180.00 is enclosed for the above-identified fee.

B. ☐ Please charge Deposit Account No. _____ in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

C. ☐ Credit Card Payment Form (PTO-2038) is enclosed in the amount of \$180.00 for the above-indicated fee.

This Information Disclosure Statement (IDS) should not be construed as a representation that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(b) exists. The submission of these documents is not intended to be deemed an admission that they are, or are considered to be, statutory prior art, analogous art, contain matter which anticipates the invention or material to patentability as defined in 37 C.F.R. § 1.56(b). Also, by this listing, the Applicant is not making any admission regarding the relative dates of the invention and listed disclosures.

Some of the documents may have markings thereon. No significance is intended to be attached to the markings. Moreover, no representation is made that any brief descriptions of the references herein necessarily describe the most material aspects of the references.

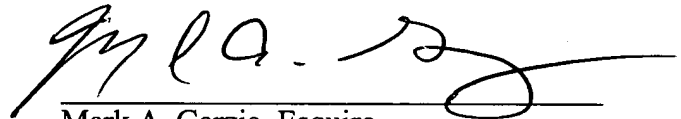
The Examiner is requested to consider carefully the complete text of these documents in connection with the examination of the above-identified application in accordance with 37 C.F.R. § 1.104(a). It is requested that the document listed on the attached Form PTO-1449 be included in the "References Cited" portion of any patent that may issue from this application (M.P.E.P. § 1302.12), and that the Examiner initial and return a copy of said form to evidence consideration of the document.

It is believed that this IDS complies with the requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98 and the Manual of Patenting Examining Procedures § 609. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to accept this IDS under the appropriate rule and to contact the undersigned by telephone promptly so that any deficiency may be remedied.

Respectfully submitted,

Douglas et al.

Date: 2 JULY 2004



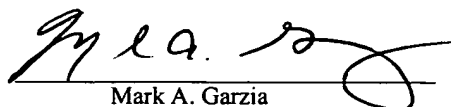
Mark A. Garzia, Esquire
Registration No. 35,517
Attorney for Applicants

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2058 Chichester Ave.
Boothwyn, PA 19061
Telephone: (610) 485-9400

CERTIFICATE OF MAILING

I hereby certify that this communication, along with any paper or fee indicated as being enclosed, is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

2 JULY 2004
Date


Mark A. Garzia

Form PTO-1449 U.S. Department of Commerce (REV. 8-93) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Application No. 10/614,598 Filed: July 7, 2003 Inventor: Douglas et al. Atty. Docket No. FDS-P10.1-US
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U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	3,082,951	03/26/1963	Kayan	235	184	
	3,707,851	01/02/1973	McAshan, Jr.	62	125	
	3,736,765	06/05/1973	O'Dell	62	127	
	4,114,448	09/19/1978	Merritt	73	362	
	4,161,106	07/17/1979	Savage et al.	62	115	
	4,186,563	02/05/1980	Schulze, Sr.	62	126	
	4,217,761	08/19/1980	Cornaire et al.	62	130	
	4,325,223	04/20/1982	Cantley	62	126	
	4,381,549	04/26/1983	Stamp, Jr. et al.	364	557	
	4,432,232	02/21/1984	Brantley et al.	73	432	
	4,510,576	04/09/1985	MacArthur et al	364	551	

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation
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	Yes	No
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

			A. E. Dabiri and C. K. Ric, 1981. "A Compressor Simulation Model with Corrections for the Level of Suction Gas Superheat," ASHRAE Transactions, Vol. 87, Part 2, pp. 771-782.
			Copy from website for iSH North America entitled "Restricted Airflow: A Common Culprit" by John Tomczyk; www.achmews.com/CDA/ArticleInformation...
			Copy from website for Contracting Business Interactive entitled "Beware of Filter Pressure Drop" by Kevin O'Neill; www.contractingbusiness.com/editorial/serviceonline/...

EXAMINER	DATE CONSIDERED
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***EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (REV. 8-93) U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		Application No. 10/725,774 Filed: December 2, 2003 Inventor: Rossi et al. Atty. Docket No. FDS-P10.1-US
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U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	4,611,470	09/16/1986	Enström	62	127	
	4,755,957	07/05/1988	White et al.	365	551	
	4,768,346	09/06/1986	Mathur	62	127	
	4,798,055	01/17/1989	Murray et al.	62	127	
	4,885,914	12/12/1989	Pearman	62	129	
	4,928,278	05/22/1990	Otsuji et al.	714	700	
	4,967,567	11/06/1990	Proctor et al.	62	127	
	5,003,256	03/26/1991	Merrill	714	814	
	5,010,743	04/30/1991	Hale	62	292	
	5,083,438	01/28/1992	McMullin	62	129	

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation

	Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

			Copy of article entitled, "Effect of reduced evaporator airflow on the high temperature performance of air conditioners" by Angel G. Rodriguez et al., Elsevier Science S.A., Energy and Buildings 24 (1996) 195-201
			Copy from website for iSH North America entitled "Performing Residential A/C Airflow Setup" by Scott Nelmark; www.achnews.com/CDA/ArticleInformation...

EXAMINER	DATE CONSIDERED
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***EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	5,115,643	05/26/1992	Hayata et al.	62	115	
	5,209,076	05/11/1993	Kauffman et al.	62	126	
	5,231,598	07/27/1993	Vlahos	714	700	
	5,239,865	08/31/1993	Salzer et al.	73	292	
	5,596,507	01/21/1997	Jones et al.	364	505	
	5,623,834	04/29/1997	Bahel et al.	62	131	
	5,666,815	09/16/1997	Aloise	62	129	
	5,760,478	06/2/1998	Bozso et al.	257	777	
	5,934,088	08/10/1999	Takeda	62	127	
	5,991,890	11/23/1999	Brown et al.	713	503	
	6,223,544 B1	05/01/2001	Seem	62	127	
	6,272,868	08/14/2001	Grabon et al	62	125	
	6,324,854	12/04/2001	Jayanth	62	127	

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation

	Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Author	Title	Date	Pertinent Pages	Etc.

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Form PTO-1449 U.S. Department of Commerce (REV. 8-93) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		Application No. 10/725,774 Filed: December 2, 2003 Inventor: Rossi et al. Atty. Docket No. FDS-P10.1-US
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U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	6,360,551	03/26/2002	Renders	62	127	
	6,439,061	08/27/2002	Nelson et al.	73	861.65	
	6,560,976	05/13/2003	Jayanth	62	127	
	6,601,397	08/05/2003	Pham et al	62	181	
	6,615,574	09/09/2003	Jayanth	62	126	
	US2002/0170299A1	11/21/2002	Jayanth et al.	62	126	
	US2003/00511490A1	02/20/2003	Pham et al.	62	228.3	
	US2003/0051490A1	03/20/2003	Jayanth	62	127	
	US2003/0115890A1	09/26/2003	Jayanth	62	126	

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation
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	Yes	No
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED
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